**In the Claims:**

1. (Currently Amended) An access point for scheduling delivery of units of data to a plurality of access terminals comprising:

a. a network interface for receiving data from a communication network;

b. a wircless interface for transmitting units of the data to a plurality of access terminals; and

c. a control system associated with the network interface and the wireless interface and adapted to:

i. store the data received over the communication network as units corresponding to the plurality of access terminals;

ii. generate a prioritization factor for each unit of data, the prioritization factor being controlled:

A. in proportion to a required data rate associated with each unit of data,

B. to maintain a minimum desired data rate associated with each unit of data, and

C. to achieve an adaptive fairness objective; and

iii. schedule transmission of each unit of data based on the prioritization factor such that more emphasis is placed on fairness when many users are close to the required data rate and more emphasis is placed on maximizing throughput when all users are far from the required data rate.

2. (Original) The access point of claim 1 wherein the adaptive fairness objective functions to adaptively increase the prioritization factor as an average data rate associated with each unit of data approaches the minimum desired data rate associated with each unit of data.

3. (Original) The access point of claim 1 wherein when there are insufficient resources to maintain the minimum desired data rate associated with each unit of data, the control system is further adapted to control the prioritization factor for each unit of data to reduce the variance in data rates associated with the units of data between different users.



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4. (Original) The access point of claim 1 wherein the adaptive fairness objective is configurable to make overall throughput of the units of data inversely proportional to fairness between different users.

5. (Original) The access point of claim 1 wherein select ones of the units of data are time-sensitive and associated with a delay bound and the control system is further adapted to control the prioritization factor for each time-sensitive unit of data in inverse proportion to an amount of time prior to the delay bound associated with each time-sensitive unit of data wherein the time-sensitive units of data are given higher priorities as the delay bounds approach.

6. (Original) The access point of claim 5 wherein each time-sensitive unit of data is associated with a start time, which represents a threshold when the prioritization factor for the unit of data is adjusted based on the delay bound.

7. (Original) The access point of claim 5 wherein the control system is further adapted to adjust the prioritization factor for each time-sensitive unit of data to control the maximum percentage of the units of data that can be dropped prior to transmission.

8. (Original) The access point of claim 1 wherein a plurality of carriers are available to transmit the units of data and the control system is further adapted to generate the prioritization factor for each unit of data for each of the plurality of carriers and schedule the transmission of each unit of data on at least one of the plurality of carriers based on the prioritization factor.

9. (Original) The access point of claim 1 wherein:

a. the adaptive fairness objective functions to adaptively increase the prioritization factor as an average data rate associated with each unit of data approaches the minimum desired data rate associated with each unit of data; and

b. select ones of the units of data are time-sensitive and associated with a delay bound and the control system is further adapted to control the prioritization factor for each time-sensitive unit of data in inverse proportion to an amount of time prior to the delay bound



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associated with each time-sensitive unit of data wherein the time-sensitive units of data are given higher priorities as the delay bounds approach.

10. (Currently Amended) A method for scheduling delivery of units of data to a plurality of access terminals comprising:

a. storing data received over a communication network as units corresponding to the plurality of access terminals;

b. generating a prioritization factor for each unit of data, the prioritization factor being controlled:

i. in proportion to a required data rate associated with each unit of data,

ii. to maintain a minimum desired data rate associated with each unit of data, and

iii. to achieve an adaptive fairness objective; and

c. scheduling transmission of each unit of data based on the prioritization factor such that more emphasis is placed on fairness when many users are close to the required data rate and more emphasis is placed on maximizing throughput when all users are far from the required data rate.

11. (Original) The method of claim 10 wherein the adaptive fairness objective functions to adaptively increase the prioritization factor as an average data rate associated with each unit of data approaches the minimum desired data rate associated with each unit of data.

12. (Previously Presented) The method of claim 10 wherein when there are insufficient resources to maintain the minimum desired data rate associated with each unit of data, the method further comprises controlling the prioritization factor for each unit of data to reduce variance in data rates associated with the units of data between different users.

13. (Original) The method of claim 10 wherein the adaptive fairness objective is configurable to make overall throughput of the units of data inversely proportional to fairness between different users.



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14. (Original) The method of claim 10 wherein select ones of the units of data are time-sensitive and associated with a delay bound and the method further comprises controlling the prioritization factor for each time-sensitive unit of data in inverse proportion to an amount of time prior to the delay bound associated with each time-sensitive unit of data wherein the time-sensitive units of data are given higher priorities as the delay bounds approach.

15. (Original) The method of claim 14 wherein each time-sensitive unit of data is associated with a start time, which represents a threshold when the prioritization factor for the unit of data is adjusted based on the delay bound.

16. (Original) The method of claim 14 further comprising adjusting the prioritization factor for each time-sensitive unit of data to control the maximum percentage of the units of data that can be dropped prior to transmission.

17. (Original) The method of claim 10 wherein a plurality of carriers are available to transmit the units of data, the prioritization factor is generated for each unit of data for each of the plurality of carriers and the transmission of each unit of data is scheduled on at least one of the plurality of carriers based on the prioritization factor.

18. (Original) The method of claim 10 wherein:

a. the adaptive fairness objective functions to adaptively increase the prioritization factor as an average data rate associated with each unit of data approaches the minimum desired data rate associated with each unit of data; and

b. select ones of the units of data are time-sensitive and associated with a delay bound and the method further comprises controlling the prioritization factor for each time-sensitive unit of data in inverse proportion to an amount of time prior to the delay bound associated with each time-sensitive unit of data wherein the time-sensitive units of data are given higher priorities as the delay bounds approach.



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19. (Currently Amended) A computer readable medium having software for scheduling transmission of units of data corresponding to a plurality of access terminals, the software comprising instructions to:

a. store data sent from a communication network as units corresponding to the plurality of access terminals;

b. generate a prioritization factor for each unit of data, the prioritization factor being controlled:

i. in proportion to a required data rate associated with each unit of data,

ii. to maintain a minimum desired data rate associated with each unit of data, and

iii. to achieve an adaptive fairness objective; and

c. schedule transmission of each unit of data based on the prioritization factor such that more emphasis is placed on fairness when many users are close to the required data rate and more emphasis is placed on maximizing throughput when all users are far from the required data rate.

20. (Original) The computer readable medium of claim 19 wherein the adaptive fairness objective functions to adaptively increase the prioritization factor as an average data rate associated with each unit of data approaches the minimum desired data rate associated with each unit of data.

21. (Previously Presented) The computer readable medium of claim 19 wherein when there are insufficient resources to maintain the minimum desired data rate associated with each unit of data, the instructions are further adapted to control the prioritization factor for each unit of data to reduce variance in data rates associated with the units of data between different users.

22. (Original) The computer readable medium of claim 19 wherein the adaptive fairness objective is configurable to make overall throughput of the units of data inversely proportional to fairness between different users.



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23. (Original) The computer readable medium of claim 19 wherein select ones of the units of data are time-sensitive and associated with a delay bound and the instructions are further adapted to control the prioritization factor for each time-sensitive unit of data in inverse proportion to an amount of time prior to the delay bound associated with each time-sensitive unit of data wherein the time-sensitive units of data are given higher priorities as the delay bounds approach.

24. (Original) The computer readable medium of claim 23 wherein each time-sensitive unit of data is associated with a start time, which represents a threshold when the prioritization factor for the unit of data is adjusted based on the delay bound.

25. (Previously Presented) The computer readable medium of claim 23 wherein the instructions are further adapted to adjust the prioritization factor for each time-sensitive unit of data to control a maximum percentage of the units of data that can be dropped prior to transmission.

26. (Original) The computer readable medium of claim 19 wherein a plurality of carriers are available to transmit the units of data and the instructions are further adapted to generate the prioritization factor for each unit of data for each of the plurality of carriers and schedule the transmission of each unit of data on at least one of the plurality of carriers based on the prioritization factor.

27. (Original) The computer readable medium of claim 19 wherein:

a. the adaptive fairness objective functions to adaptively increase the prioritization factor as an average data rate associated with each unit of data approaches the minimum desired data rate associated with each unit of data; and

b. select ones of the units of data are time-sensitive and associated with a delay bound and the instructions are further adapted to control the prioritization factor for each time-sensitive unit of data in inverse proportion to an amount of time prior to the delay bound associated with each time-sensitive unit of data wherein the time-sensitive units of data are given higher priorities as the delay bounds approach.



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28. (Currently Amended) A system for scheduling delivery of units of data to a plurality of access terminals comprising:

a. means for storing data received over a communication network as units corresponding to the plurality of access terminals;

b. means for generating a prioritization factor for each unit of data, the prioritization factor being controlled:

i. in proportion to a required data rate associated with each unit of data,

ii. to maintain a minimum desired data rate associated with each unit of data, and

iii. to achieve an adaptive fairness objective; and

c. means for scheduling transmission of each unit of data based on the prioritization factor such that more emphasis is placed on fairness when many users are close to the required data rate and more emphasis is placed on maximizing throughput when all users are far from the required data rate.



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